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Outcomes of Modified Harrington Reconstructions for Nonprimary Periacetabular Tumors: An Effective and Inexpensive Technique

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Bernthal NM, Price SL, Monument MJ, Wilkinson B, Jones KB, Randall RL. Ann Surg Oncol. 2015 Dec;22 Suppl 3:S1612. doi: 10.1245/s10434-015-4543-y. PMID: 25851340 No abstract available.

Abstract

Background: Metastatic disease to the acetabulum presents a difficult technical and philosophical challenge: complicated surgeries in patients with often short life expectancies force us to examine both the outcome and cost of these operations. Therefore, we studied the durability of a cement-screw rebar reconstruction technique and risk factors for failure, and we compare the results to other reconstruction options.

Methods: This is a retrospective review of 52 acetabular reconstructions in 50 patients for nonprimary disease using a retrograde screw-rebar-cement all-polyethylene technique. Mean age was 57 years (range 25-81 years). Twenty-four lesions were classified as Harrington class II; 28 were Harrington class III. Mean follow-up was 17.7 months (range 1-92 months). Outcomes included patient survival, prosthesis survival, and complications.

Results: Forty-eight of 50 (96 %) patients ambulated after surgery. Five of 52 (9.6 %) of prostheses failed, three from loosening due to tumor progression, one from aseptic loosening, and one from soft tissue instability (dislocation). The three cases of tumor progression failure occurred in patients with massive preoperative ischial tumor burden. Mean surgical time was 198 min, and hospital stay was 5.2 days.

Discussion: The screw-cement-rebar all-polyethylene cup reconstruction technique is a comparatively successful and inexpensive reconstruction option for treating nonprimary oncologic disease in the acetabulum. All cases of loosening occurred beyond the median patient survival. Surgeons should be wary of massive ischial tumor burden in patients with projected longevity, as it may be associated with implant failure. Surgical time and hospital stay are consistent with historical data for alternative implants, and implant cost is lower.